

### **REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed September 13, 2004. Upon entry of the amendments in this response, claims 1, 3 – 15, 17 – 18, 20, 22 – 25, 27 – 28 and 30 - 32 remain pending. In particular, Applicants have amended claims 1, 3, 7, 12, 15, 18, 20, 22 – 25 and 28, and have canceled claims 2, 16, 19, 21, 26 and 29 without prejudice, waiver, or disclaimer. Applicants have canceled claims 2, 16, 19, 21, 26 and 29 merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these canceled claims in a continuing application, if Applicants so choose, and do not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **In the Drawings**

Enclosed with this Response are replacement sheets of drawings for FIGs. 5 – 8. Applicants submit the replacement sheets to correct the spelling of the term “BUFF” and respectfully assert that the amendments to the drawings add no new matter. Applicants respectfully request that the replacement sheets of drawings be entered.

### **In the Specification**

The Office Action indicates that the disclosure stands objected to because of several informalities. As set forth above, Applicants have amended the specification and respectfully assert that the objections have been rendered moot.

### **Objections to the Claims**

The Office Action indicates that claims 21 – 25 stand objected to because of various informalities. As set forth above, Applicants have amended the claims and respectfully assert that the objections have been rendered moot.

### **Rejections Under 35 U.S.C. §112, First Paragraph**

The Office Action indicates that claim 19 stands rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Although Applicants respectfully disagree with the contention of this rejection, Applicants have canceled claim 19 and respectfully assert that the rejection has been rendered moot.

### **Rejections Under 35 U.S.C. §112, Second Paragraph**

The Office Action indicates that claims 1, 7, 16, 22 - 25 and 28 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse the rejection. Specifically, with respect to claim 16, Applicants have canceled this claim and respectfully assert that the rejection as to this claim has been rendered moot. With respect to the remaining claims, Applicants have amended these claims and respectfully asserts that the rejection has been accommodated.

### **Rejections Under 35 U.S.C. §102**

The Office Action indicates that claims 1 – 5 and 28 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Braun*. The Office Action also indicates that claims 15 – 17, 19 – 22 and 24 - 27 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Sasin*. With respect to claims 2, 16, 19, 21 and 26, Applicants have canceled these claims and

respectfully assert that the rejection as to these claims has been rendered moot. With respect to the remaining claims, Applicants respectfully traverse the rejections.

In this regard, Applicants have amended claim 1 to recite:

1. A method for diagnosing faults in a system under test (SUT), the SUT defining data transmission paths through which data are transferred, said method comprising:  
identifying portions of the data transmission paths of the SUT capable of introducing errors in data transfer;  
providing constraints defining relationships of at least some of the portions of the data transmission paths identified; and  
diagnosing the SUT with respect to the constraints,  
***wherein identifying comprises providing a dataflow model corresponding to the SUT, the dataflow model including edges, each of the edges corresponding to a portion of one of the data transmission paths of the SUT capable of introducing errors in data transfer.***  
(Emphasis Added).

Applicants respectfully assert that *Braun* does not teach or otherwise disclose at least the features/limitations emphasized above in claim 1. Specifically, Applicants respectfully direct the Examiner's attention to FIG. 1 and the description of that figure at column 4, which indicates that "FIG. 1 is a view of a schematic diagram showing a circular data transmission system." Therefore, FIG. 1 does not depict a dataflow model as alleged in the Office Action. Additionally, *Braun* further discloses:

The system is characterized by the following method steps:

One of the surveillance stations emits continuously test signals according to a substantially rigid time cycle, which test signals are directed to substantially all terminal units. A test circuit of each terminal unit compares if at the time intervals given by the time cycle of the surveillance station in each case a test signal is received and if this is the case, further if the test signal is free from errors.  
(*Braun*, col. 4, lines 50 – 59).

Thus, not only is the information depicted in FIG. 1 of *Braun* not a dataflow model, *Braun's* system does not function in the manner recited in Applicants' claims. Therefore, Applicants respectfully assert that the rejection is improper, and that claim 1 is in condition for allowance. Since claims 3 – 5 are dependent claims incorporating all the

features/limitations of claim 1, Applicants respectfully assert that these claims also are in condition for allowance.

With respect to claim 28, that claim has been amended to recite:

28. A diagnosis system stored on a computer-readable medium, the diagnosis system being adapted to diagnose faults in a system under test (SUT), said diagnosis system comprising:  
logic configured to identify portions of the data transmission paths of the SUT capable of introducing errors in data transfer;  
logic configured to provide constraints defining relationships of at least some of the portions of the data transmission paths; and  
logic configured to diagnose the SUT with respect to the constraints,  
***wherein said logic configured to diagnose comprises:  
logic configured to provide a dataflow model representative of error-free behavior of the SUT; and  
logic configured to analyze the SUT with respect to a dataflow model.***  
(Emphasis added).

Applicants respectfully assert that *Braun* is deficient for the purpose of anticipating claim 28, because at least the features/limitations emphasized are not taught or otherwise disclosed by *Braun*. In this regard, Applicants respectfully assert that *Braun* does not teach or otherwise disclose a dataflow model representative of error free behavior of the SUT.

Therefore, Applicants respectfully assert that claim 28 is in condition for allowance.

With respect to claim 15, that claim recites:

15. A method for diagnosing faults in a system under test (SUT), said method comprising:  
***providing a dataflow model representative of error-free behavior of the SUT, the dataflow model including information corresponding to a relationship of error detection capabilities of data packet flow through the SUT;***  
***providing constraints defining relationships of portions of the dataflow model, the constraints comprising equations describing the flow of the data packets through the SUT;*** and  
diagnosing the SUT with respect to the dataflow model using the constraints.  
(Emphasis Added).

Applicants respectfully assert that *Sasin* is deficient for the purpose of anticipating claim 15, because at least the features/limitations emphasized above are not taught or

otherwise disclosed by *Sasin*. Specifically, Applicants respectfully assert that *Sasin* does not involve the use of a dataflow model as recited in Applicants' claim 15. In this regard, Applicants respectfully note that *Sasin* refers to use of a test state model in contrast to the dataflow model recited. Since a test state model is not a "dataflow model representative of the error free behavior of the SUT, the data flow model including information corresponding to a relationship with error detection capabilities of data packet flow through the SUT," Applicants respectfully assert that the rejection is improper. Applicants respectfully assert therefore that claim 15 is in condition for allowance. Since claim 17 is a dependent claim that incorporates all the features/limitations of claim 15, Applicants respectfully assert that the rejection of this claim also is improper and that claim 17 is in condition for allowance.

With respect to claim 20, that claims recites:

20. A system for diagnosing faults in a system under test (SUT), said system comprising:  
a dataflow model representative of error detection capabilities of the SUT; and  
a reasoning engine associated with said dataflow model, said reasoning engine being adapted to evaluate test results corresponding to the SUT in relation to said dataflow model,  
***wherein said dataflow model is a directed graph including edges and vertices, each of said edges corresponding to at least a portion of a data transmission path of the SUT through which an error can be introduced, each of said edges being defined by two of said vertices.***  
(Emphasis Added).

Applicants respectfully assert that *Sasin* is deficient for the purpose of anticipating claim 20, because at least the features/limitations emphasized above are not taught or otherwise disclosed by *Sasin*. Specifically, Applicants respectfully assert that *Sasin* does not involve the use of a dataflow model as recited in Applicants' claim 20. Applicants respectfully assert therefore that the rejection of claim 20 is improper and that claim 20 is in condition for allowance. Since claims 22 and 24 are dependent claims that incorporate all the

features/limitations of claim 20, Applicants respectfully assert that the rejection of these claims also are improper and that claims 22 and 24 are in condition for allowance.

With respect to claim 25, that claim recites:

25. A system for diagnosing faults in a system under test (SUT), said system comprising:  
means for receiving test results corresponding to portions of data transmission paths of the SUT; and  
means for diagnosing the SUT with respect to constraints defining relationships of at least some of the portions of data transmission paths of the SUT,  
***wherein said means for diagnosing includes means for analyzing the SUT with respect to a dataflow model representative of error-free behavior of the SUT.***  
(Emphasis Added).

Applicants respectfully assert that *Sasin* is deficient for the purpose of anticipating claim 25, because at least the features/limitations emphasized above are not taught or otherwise disclosed by *Sasin*. Specifically, Applicants respectfully assert that *Sasin* does not involve the use of a dataflow model as recited in Applicants' claim 25. Therefore, Applicants respectfully assert that 25 is in condition for allowance. Since claim 27 is a dependent claim that incorporates all the features/limitations of claim 25, Applicants respectfully assert that the rejection of this claim also is improper and that claim 27 is in condition for allowance.

### **Rejections Under 35 U.S.C. §103**

The Office Action indicates that claims 6 – 10, 12 – 14 and 29 - 32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Braun* as applied to claim 1, and in view of *Sasin*. The Office Action also indicates that claim 11 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Braun* in view of *Circo*. Additionally, the Office Action indicates that claim 18 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Sasin* in view of *Circo*. The Office Action also indicates that claim 23 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Sasin* in view of *Braun*. With respect to claim

29, Applicants have canceled this claim and respectfully assert that the rejection as to this claim has been rendered moot. With respect to the remaining claims, Applicants respectfully traverse the rejections.

In particular, Applicants respectfully assert that the pending rejections under 35 U.S.C. 103 stand asserted against dependent claims, the respective independent claims of which having been discussed above. Applicants respectfully assert that the deficiencies discussed above with respect to the independent claims have not been adequately remedied by the additional references. That is, Applicants respectfully assert that the combination of references do not teach or reasonably suggest at least the features/limitations mentioned above as lacking with respect to the rejections under 35 U.S.C. 102. Since the cited combinations of references do not teach or reasonably suggest all the features/limitations recited in the respective independent claims, Applicants respectfully assert that the dependent claims presently rejected under 35 U.S.C. 103(a) are improperly rejected. Therefore, Applicants respectfully request withdrawal of the rejections for these claims and respectfully request that these claims be placed in condition for allowance.

#### **Double Patenting Rejection**

The Office Action indicates that claims 1 – 7, 9, 10, 25 and 27 - 32 stand provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1 – 5, 7 – 8 and 21 - 27 of copending U.S. Patent Application No. 2003/0177416. Applicants acknowledge that the rejection is a provisional obviousness-type double patenting rejection and that no action need be taken at this time.

**Cited Art Made of Record**

The cited art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.



### CONCLUSION

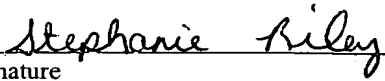
In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

  
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 11/17/04.

  
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Signature